

AMENDMENTS TO THE CLAIMS

1. (Currently Amended) A multimedia information generation apparatus for generating
[[a]] multimedia information ~~data file~~ including at least one two-dimensional image data or
character information and at least ~~one two~~ three-dimensional image data based on a plurality of
viewpoints enabling stereoscopic vision, said multimedia information generation apparatus
comprising:

a control information generation unit capable of generating, based on an input parameter,
three-dimensional image display control information necessary for converting said three-
dimensional image data for enabling stereoscopic vision in a desired form appropriate for a
display unit ~~for controlling display of said three-dimensional image, wherein said control~~
~~information includes the number of viewpoints for said three dimensional image and at least i)~~
~~camera arrangement information for image pick-up, ii) a direction of thinning during generation~~
~~of said three dimensional image from said two dimensional image, iii) parallax amount shift~~
~~limit information, iv) parallax image switching pitch information, v) image arrangement of said~~
~~two dimensional images corresponding to parallax images, and vi) reversal information on each~~
~~of said parallax images; and~~

a multimedia information generation unit generating said multimedia information data
~~file including~~ constituted of said at least one two-dimensional image data or character
information and said at least ~~one two~~ three-dimensional image data, ~~and~~ said control information,
and header information necessary for reproducing data, and

said control information generation unit generating identification data for identifying said
at least two three-dimensional image data and including said identification data in said three-

dimensional image display control information, and only one said identification data being provided for said at least two three-dimensional image data~~wherein~~

~~said camera arrangement information for image pick-up indicates one of a parallel camera arrangement, a convergent camera arrangement and a divergent arrangement,~~

~~said at least one two-dimensional image or character information and at least one three-dimensional image are data to be synthesized.~~

2. (Canceled).

3. (Currently Amended) The multimedia information generation apparatus according to claim 1, ~~or 2, wherein said control information is provided correspondingly to each~~ wherein said identification data is provided for the whole of said at least two three-dimensional image data.

4. (Canceled).

5. (Currently Amended) The multimedia information generation apparatus according to claim 1, wherein

an identifier for identifying each of at least said two dimensional image data and said three-dimensional image data is set in advance, and

~~said control information~~ identification data includes said identifier of ~~the said~~ three-dimensional image data.

6. (Canceled).

7. (Canceled).

8. (Currently Amended) The multimedia information generation apparatus according to claim 5 [[or 6]], wherein

a predetermined value of said identifier indicates that all ~~of images~~ image data included in said multimedia information data file are three-dimensional ~~images~~ image data.

9. (Canceled).

10. (Currently Amended) A multimedia information reproduction apparatus for reproducing multimedia information generated by a multimedia information generation apparatus, said multimedia information generation apparatus generating from said multimedia information constituted of at least one two-dimensional image data or character information and at least two three-dimensional image data, three-dimensional image display control information, and header information necessary for reproducing data-data files, each including at least one two-dimensional image or character information of two-dimensional page data and at least one three-dimensional image, said multimedia information reproduction apparatus comprising:

a generation unit generating [[a]] three-dimensional image data from said two-dimensional image data ~~or character information of two-dimensional page data~~; and

a first synthesis unit synthesizing said three-dimensional image data generated by said generation unit and ~~the three-dimensional image data~~ included in said ~~each multimedia information data file, wherein~~

~~generating the three dimensional image from said character information of two dimensional page data includes thinning a horizontal resolution of the character information of two dimensional page data to $1/n$ when a number of viewpoints for the three dimensional image is n , and then making a line forming a portion of three dimensional image to have one of a horizontal dimension and vertical dimension that is bolder than that of a line representing a corresponding portion of the character information of two dimensional page data.~~

11. (Currently Amended) The multimedia information reproduction apparatus according to claim 10, further comprising a second synthesis unit synthesizing a plurality of two-dimensional image data ~~images or character information of two dimensional page data, and wherein~~

said generation unit generates the three-dimensional image data from the two-dimensional image data synthesized ~~obtained through synthesis by said second synthesis unit; instead of said two dimensional images or character information of two dimensional page data.~~

Claims 12 - 13 (Canceled).

14. (Currently Amended) A multimedia information reproduction apparatus for reproducing multimedia information generated by the multimedia information generation

~~apparatus as recited in claim 1 from multimedia information data files, each including a plurality of sets of at least one two-dimensional image or character information and at least one three-dimensional image, said multimedia information reproduction apparatus comprising:~~

~~a page data decoding unit decoding graphic and character information included in said each multimedia information data file to obtain [[a]] page image data;~~

~~a 2D/3D conversion unit converting said page image data into [[a]] three-dimensional image data; and~~

~~a first synthesis unit synthesizing the three-dimensional image data generated by said 2D/3D conversion unit and the three-dimensional image data included in said each multimedia information data file;~~

~~a second synthesis unit synthesizing a plurality of two-dimensional images, and~~

~~said 2D/3D conversion unit converts two dimensional image data obtained through synthesis by said second synthesis unit into three dimensional image data, converting two-dimensional data into three dimensional image data by the 2D/3D conversion unit including thinning a horizontal resolution of the two dimensional data to $1/n$ when a number of viewpoints for the three dimensional image is n and duplicating each thinned image to generate two images, wherein~~

~~a first font image and a second font image corresponding to the character information are provided,~~

~~a line forming a portion of said second font image has one of a horizontal dimensional and vertical dimension that is thinner than that of a line representing a corresponding portion of said first font image, said first font image is used when the character information is three-~~

~~dimensionally displayed and said second font image is used when the character information is two-dimensionally displayed.~~

15. (Canceled).

16. (Canceled).

17. (Canceled).

18. (Canceled).

19. (Canceled).

20. (Canceled).

21. (Canceled).

22. (New) The multimedia information reproduction apparatus according to claim 14, further comprising a second synthesis unit synthesizing a plurality of two-dimensional image data, wherein said 2D/3D conversion unit converts the two-dimensional image data synthesized by said second synthesis unit into three-dimensional image data.

23. (New) The multimedia information reproduction apparatus according to claim 14 or 22, wherein

a first font image and a second font image corresponding to character information are provided, and

said first font image is used when the character information is three-dimensionally displayed, and said second font image is used when the character information is two-dimensionally displayed.

24. (New) The multimedia information reproduction apparatus according to claim 23, wherein said page data decoding unit uses said first or second font image to obtain the page image data.

25. (New) The multimedia information reproduction apparatus according to claim 23, wherein said 2D/3D conversion unit uses said first or second font image to obtain the three-dimensional image data.

26. (New) The multimedia information reproduction apparatus according to claim 24 or 25, further comprising:

a font image storage unit storing said first font image and said second font image; and

a switch selecting said first font image or said second font image.

27. (New) The multimedia information reproduction apparatus according to claim 24 or 25, further comprising a font conversion unit converting the second font image into the first font image.

28. (New) The multimedia information reproduction apparatus according to claim 23, wherein said first font image is comprised of a plurality of pieces of light/dark information and arranged so that apparent character thickness is thin.